

REMARKS

This is in response to the Office Action mailed 3/6/2008. Minor amendments have been made to claims 1, 9, and 16 to correct grammatical issues. Specifically, the previous language used an “or” with the phrase “at least the following parameters” when it should have been an “and”. Applicants have corrected this grammatical error in claims 1, 9, and 16. Further, an antecedent basis issue with regards to claim 1 was also corrected. No new matter was added via the current amendment. This response should obviate outstanding issues and make the remaining claims allowable. Reconsideration of this application is respectfully requested in view of this response.

STATUS OF CLAIMS

Claims 1-20 are pending.

Claims 1-20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Lee et al. (U.S. Patent 6,958,992).

OVERVIEW OF CLAIMED INVENTION

The present invention provides for a system and method for facilitating communication between IP phones (with an assigned phone number) over a packet-based communication protocol, wherein the IP phones are located behind a firewall. The present invention's IP phone comprises DHCP client software and IP agent software. The DHCP client software, upon an initial power up of the IP phone, communicates with its firewall to receive an IP address. The IP agent software, upon receiving said IP address from said firewall, registers the IP phone with a DNS switch based upon at least the following parameters: the assigned phone number, the

received IP address, a public IP address associated with the firewall, or a MAC address associated with the IP phone. Upon successful registration with said DNS switch, the IP agent software receives a port number and address over which future communications are to be performed.

In one embodiment, communications between the IP agent and the DNS switch is via the Transmission Control Protocol/Internet Protocol (TCP/IP) protocol.

In another embodiment, the IP agent additionally monitors and detects changes to the public IP address associated with the corresponding firewall; upon detecting such a change, the IP agent identifies a new public IP address of said firewall and reregisters the newly identified public address with the DNS switch based upon at least the following parameters: the assigned phone number, the received IP address, the identified new public IP address associated with corresponding firewall, or the MAC address associated with said IP phone. In an extended embodiment, the IP agent monitors changes to the public IP address associated with the corresponding firewall at pre-set time intervals. In yet another embodiment, the DNS switch is behind an Internet Service Provider (ISP) gateway.

REJECTIONS UNDER 35 U.S.C. § 103(a)

Claims 1-20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Lee et al. (U.S. Patent 6,958,992), hereafter Lee. To be properly rejected under 35 U.S.C. § 103(a), the cited reference (or references) must teach each and every feature of the claims. Applicants respectfully assert that Lee fail to teach many of the features of Applicants' pending claims.

Lee discloses a method and apparatus for registering IP phones with an IP phone switch using access codes or personal identification numbers for authentication and for associating directory numbers to MAC addresses of IP phones. Lee's solution targets the disadvantages of manual entry of MAC addresses (including attendant keyboarding errors, difficulty in re-associating the directory numbers with other MAC addresses when people move within an enterprise, etc.). This manual entry of MAC addresses is solved by registering IP phones with an IP phone switch using access codes or personal identification numbers for authentication and for associating directory numbers to MAC addresses of IP phones.

Applicants' invention, by stark contrast, is NOT involved in addressing the manual entry of MAC addresses but, rather, addresses the problem of the inability of IP phones to smoothly operate behind security devices, such as firewalls. Specifically, Applicants claim 1 teaches an IP phone with an assigned phone number capable of communicating over a packet-based communication protocol, said IP phone located behind a firewall, wherein the IP phone comprises: DHCP client software, upon an initial power up of said IP phone, communicating with said firewall to receive an IP address; and IP agent software, upon receiving said IP address from said firewall, registering with a DNS switch based upon at least the following parameters: said assigned phone number, said received IP address, a public IP address associated with said firewall, and a MAC address associated with said IP phone. Upon successful registration with said DNS switch, the IP agent software receives a port number and address over which future communications are to be performed.

With respect to the feature of “DNS switch”, the Examiner states on page 3 of the Office Action of 03/06/2008 that “element 100” and “col. 2, lines 28-32” of Lee teach such a DNS switch. Figure 1 of Lee is provided below:

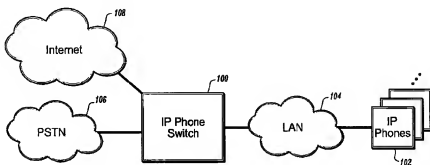


FIG. 1

Also, column 2, lines 28-32 of Lee are provided below:

“When the IP phone 102 is powered, it establishes an IP socket with the IP phone switch 100 and uses Dynamic Host Configuration Protocol (DHCP) to obtain an IP address from the *IP phone switch 100*. The IP phone 102 further supports the ability to prompt a user on its display to enter a personal identification number (PIN) and to forward the PIN to the *IP phone switch 100*.”
(emphasis added).

Applicants wish to note that the element cited by the examiner in both citations refers to an “**IP Phone Switch**”. Applicants respectfully point out that a “**phone switch**” CANNOT be equated to a “**DNS switch**”. DNS switch, as the name suggests, is associated with **network DNS**, whereas a phone switch is an entity to register phones, or in the case of IP phones, **an entity to register MAC addresses associated with IP phones**.

Further, with regards to the rejection of claim 1, Applicants agree with the Examiner's statement that Lee "does not teach specifically that the IP phone (102) is located behind a firewall." However, Applicants respectfully disagree with the Examiner that it would have been obvious to have implemented an IP phone behind a firewall. However, the Examiner still has a burden as to show, with evidence, where in Lee or in the knowledge known in the art, was it obvious to have sent the "public address associated with the firewall" to a "DNS switch". The Examiner has failed to specifically address what feature of Lee either teaches or renders obvious such a feature. Applicants respectfully assert that Lee fails to teach or suggest such a feature as there would have been no need for Lee's IP phone to request a public address of a firewall as the registration of an IP phone, according to Lee's method, requires only a PIN and the MAC address of the IP phone.

Further, the Examiner is reminded that the DNS switch (not the phone switch) of Applicants' invention receives the assigned phone number of the IP phone, a DHCP IP address of the IP phone, a public IP address associated with the firewall, and a MAC address associated with said IP phone. It is based on all of these parameters the DNS switch (not the phone switch) sends a port number and address over which future communications are performed using the IP phone. Such a teaching is neither taught nor suggested in Lee.

Hence, at least for the reasons set forth above, Applicants respectfully assert that the teachings of Lee cannot render obvious Applicants' claim 1. Therefore, Applicants respectfully

request the Examiner to withdraw the 35 U.S.C. §103(a) rejection with regards to claim 1, and further requests allowance thereof.

Applicants claim 9 teaches a method for facilitating a communication link between one or more IP phones located behind a first firewall and one or more IP phones behind a second firewall via a DNS switch, said method as implemented in said DNS switch comprising the steps of: (a) receiving a request for an unique IP address from a first IP phone located behind said first firewall and a second IP phone located behind said second firewall; (b) transmitting a unique IP address to said first and second IP phones; (c) receiving a request for registration from said first and second IP phones, each of said requests based upon at least the following parameters: a unique assigned phone number, a unique IP address, a public IP address associated with corresponding firewall, and a unique MAC address, (d) registering said first and second IP phones based upon said received parameters associated with each IP phone, and upon successful registration, transmitting a port number and address to said first and second IP phones over which future communications are to be performed, and wherein a communication link is facilitated at said DNS switch between said first IP phone and second IP phone via said transmitted port number and address.

Further, Applicants claim 16 teaches an article of manufacture comprising a computer user medium having computer readable code embodied therein which facilitates communication between an IP phone with an assigned phone number capable of communicating over a packet-based communication protocol and a DNS switch, wherein the IP phone is located behind a firewall and the medium comprises: (a) computer readable program code communicating with

said firewall to receive an IP address, (b) computer readable program code, upon receiving said IP address from said firewall, registering with a DNS switch based upon at least the following parameters: said assigned phone number, said received IP address, a public IP address associated with said firewall, and a MAC address associated with said IP phone, and (c) computer readable program code, upon successful registration with said DNS switch, receiving a port number and address over which future communications are to be performed.

As mentioned above, Lee fails to teach a DNS switch and further fails to teach the reception of the following parameters at the DNS switch: a unique assigned phone number, a unique IP address, a public IP address associated with corresponding firewall, and a unique MAC address. Also as mentioned above, Lee also fails to teach a DNS switch that transmits a port number and address based on the above-mentioned parameters.

Hence, at least for the reasons set forth above, Applicants respectfully assert that the teachings of Lee cannot render obvious Applicants' claims 9 and 16. Therefore, Applicants respectfully request the Examiner to withdraw the 35 U.S.C. §103(a) rejection with regards to claims 9 and 16, and further requests allowance thereof.

The above-mentioned arguments with respect to Applicants' independent claim 1, 9, and 16 substantially apply to dependent claims 2-8, 10-15, and 17-20 as they inherit all the features of the claim from which they depend. Therefore, at least for the reasons set forth above,

Applicants respectfully request the Examiner to withdraw the 35 U.S.C. §103(a) rejection with regards to claims 2-8, 10-15, and 17-20, and further requests allowance thereof.

SUMMARY

As has been detailed above, none of the references, cited or applied, provide for the specific claimed details of Applicants' presently claimed invention, nor renders them obvious. It is believed that this case is in condition for allowance and reconsideration thereof and early issuance is respectfully requested.

As this response has been timely filed, no request for extension of time or associated fee is required. However, the Commissioner is hereby authorized to charge any deficiencies in the fees provided to Deposit Account No. 50-4098.

If it is felt that an interview would expedite prosecution of this application, please do not hesitate to contact Applicants' representative at the below number.

Respectfully submitted,

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